

What is Claimed:

1       1. A method of preventing a flooding attack on a network  
2       server in which a large number of requests are received for  
3       connection to a port number on the server, comprising:

4               determining, in response to a request from a host for a  
5       connection to a port number on the server, if the number of  
6       connections to the port assigned to the host exceeds a  
7       prescribed threshold, and, if so,

8               denying the request for a connection.

9       2. The method of claim 1 in which denying the request  
10      further comprises:

11               overriding the denial and allowing the request if a  
12      quality of service parameter pertaining to the requesting  
13      host permits the override.

14       3. The method of claim 2 wherein a connection request is  
15      denied in any event if the number of available connections  
16      to the port are less than a constrained threshold.

17       4. The method of claim 1 or claim 2 or claim 3 further  
18      comprising:

3               calculating the prescribed threshold by multiplying a  
4               percentage P by the number of available connections  
5               remaining for the port.

1       5. Apparatus for preventing a flooding attack on a network  
2               server in which a large number of requests are received for  
3               connection to a port number on the server, comprising:

4               means for determining, in response to a request from a  
5               host for a connection to a port number on the server, if the  
6               number of connections to the port assigned to the host  
7               exceeds a prescribed threshold, and

8               means responsive to the determining means for denying  
9               the request for a connection.

10       6. The apparatus of claim 5 in which means for denying  
11               further comprises:

12               means responsive to a quality of service parameter  
13               pertaining to the requesting host for overriding a request  
14               denial and allowing the request.

15       7. The apparatus of claim 6 further comprising:

16               means for denying a connection request in any event if  
17               the number of available connections to the port are less

4 than a constrained threshold.

1 8. The apparatus of claim 5 or claim 6 or claim 7 further  
2 comprising:

3 means for calculating the prescribed threshold by  
4 multiplying a percentage P by the number of available  
5 connections remaining for the port.

1 9. A storage media containing program code segments for  
2 preventing a flooding attack on a network server in which a  
3 large number of requests are received for connection to a  
4 port number on the server, comprising:  
5  
6  
7  
8  
9

10 a first code segment activated in response to a request  
11 from a host for a connection to a port number on the server  
12 for determining if the number of connections to the port  
13 assigned to the host exceeds a prescribed threshold, and  
14  
15

16 a second code segment responsive to the first code  
17 segment for denying the request for a connection.  
18  
19

20 10. The media of claim 9 in which the second code segment  
21 further comprises:  
22  
23

24 a third code segment for overriding the denial and  
25 allowing the request if a quality of service parameter

5 pertaining to the requesting host permits the override.

1       11. The media of claim 10 further comprising a fourth code  
2       segment for denying a connection request in any event if the  
3       number of available connections to the port are less than a  
4       constrained threshold.

1       12 . The media of claim 9 or claim 10 or claim 11 further  
2       comprising:

3                 a fifth code segment for calculating the prescribed  
4       threshold by multiplying a percentage P by the number of  
5       available connections remaining for the port.

6       13. A carrier wave containing program code segments for  
7       preventing a flooding attack on a network server in which a  
8       large number of requests are received for connection to a  
9       port number on the server, comprising:

10                 a first code segment activated in response to a request  
11       from a host for a connection to a port number on the server  
12       for determining if the number of connections to the port  
13       assigned to the host exceeds a prescribed threshold, and

14                 a second code segment responsive to the first code  
15       segment for denying the request for a connection.

1       14. The carrier wave of claim 13 in which the second code  
2       segment further comprises:

3                 a third code segment for overriding the denial and  
4       allowing the request if a quality of service parameter  
5       pertaining to the requesting host permits the override.

1       15. The carrier wave of claim 14 further comprising a  
2       fourth code segment for denying a connection request in any  
3       event if the number of available connections to the port are  
4       less than a constrained threshold.

16. The carrier wave of claim 13 or claim 14 or claim 15  
further comprising:

a fifth code segment for calculating the prescribed  
threshold by multiplying a percentage P by the number of  
available connections remaining for the port.